DEPARTMENT OF ENERGY

10 CFR Part 430

EERE-2017-BT-TP-0028

RIN 1904-AE03

Energy Conservation Program: Test Procedures for Water Closets and Urinals

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

ACTION: Final rule.

SUMMARY: This final rule amends the test procedures for water closets and urinals to reference the most recent update to the relevant industry standard, American Society of Mechanical Engineers ("ASME") Standard A112.19.2-2018. In this final rule, the Department of Energy ("DOE") is also amending certain definitions and adding definitions for certain terms that are currently used in the Federal test procedures but are not defined.

DATES: The effective date of this rule is **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**. The final rule changes will be mandatory for product testing starting [**INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER***]. The incorporation by reference of certain material listed in this rule is approved by the Director of the Federal Register as of [**INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER***].

ADDRESSES: The docket, which includes *Federal Register* documents, public meeting attendee lists and transcripts, comments, and other supporting documents/materials, is available for review *www.regulations.gov*. All documents in the docket are listed in the *www.regulations.gov* index. However, some documents listed in the index, such as those containing information that is exempt from public disclosure, may not be publicly available.

A link to the docket web page can be found at *www.regulations.gov/docket/EERE-2017-BT-TP-0028*. The docket web page contains instructions on how to access all documents, including public comments, in the docket.

For further information on how to review the docket contact the Appliance and Equipment Standards Program staff at (202) 287-1445 or by e-mail: *ApplianceStandardsQuestions@ee.doe.gov*.

FOR FURTHER INFORMATION CONTACT: Mr. Bryan Berringer, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Office, EE-5B, 1000 Independence Avenue, SW., Washington, DC, 20585-0121. Telephone: (202) 586-0371. E-mail *ApplianceStandardsQuestions@ee.doe.gov*.

Mr. Matthew Ring, U.S. Department of Energy, Office of the General Counsel, GC-33, 1000 Independence Avenue, SW., Washington, DC, 20585-0121. Telephone: (202) 586-2555. E-mail: *Matthew.Ring@hq.doe.gov*.

SUPPLEMENTARY INFORMATION: DOE incorporates by reference the following industry standard into part 430**:**

ASME A112.19.2-2018/CSA B45.1-18, "Ceramic plumbing fixtures," July 2018 (including Errata — October 2018) ("ASME A112.19.2-2018").

Copies of ASME A112.19.2-2018 can be obtained from American Society of Mechanical Engineers at Three Park Avenue, New York, NY 10016-5990, 1-800 843-2763, or by going to *www.asme.org*.

For a further discussion of this standard, see section IV.N of this document.

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I. Authority and Background

Water closets and urinals are included in the list of "covered products" for which the U.S. Department of Energy ("DOE") is authorized to establish and amend energy conservation standards and test procedures. (42 U.S.C. 6292(a)(17) and (18)) DOE's energy conservation standards and test procedures for water closets and urinals are currently prescribed at title 10 Code of Federal Regulations ("CFR") 430.23(u) and (v), respectively, and 10 CFR part 430, subpart B, appendix T ("appendix T"). The following sections discuss DOE's authority to establish test procedures for water closets and urinals and relevant background information regarding DOE's consideration of test procedures for this equipment.

A. Authority

The Energy Policy and Conservation Act, as amended ("EPCA"),[1] authorizes DOE to regulate the energy efficiency of a number of consumer products and certain industrial equipment. (42 U.S.C. 6291–6317) Title III, Part B[2] of EPCA established the Energy Conservation Program for Consumer Products Other Than Automobiles, which sets forth a variety of provisions designed to improve energy efficiency and water use. These products include water closets and urinals, the subject of this document. (42 U.S.C. 6292(a)(17) and (18))

[1] All references to EPCA in this document refer to the statute as amended through the Infrastructure Investment and Jobs Act, Pub. L. 117-58 (Nov. 15, 2021).
[2] For editorial reasons, upon codification in the U.S. Code, Part B was redesignated Part A.

The energy conservation program under EPCA consists essentially of four parts: (1) testing, (2) labeling, (3) Federal energy conservation standards, and (4) certification and enforcement procedures. Relevant provisions of EPCA specifically include definitions (42 U.S.C. 6291), test procedures (42 U.S.C. 6293), labeling provisions (42 U.S.C. 6294), energy conservation standards[3] (42 U.S.C. 6295), and the authority to require information and reports from manufacturers (42 U.S.C. 6296).

The testing requirements consist of test procedures that manufacturers of covered products must use as the basis for (1) certifying to DOE that their products comply with the applicable energy conservation standards adopted under EPCA (42 U.S.C. 6295(s)), and (2) making representations about the efficiency of those products (42 U.S.C. 6293(c)). Similarly, DOE must use these test procedures to determine whether the products comply with any relevant standards promulgated under EPCA. (42 U.S.C. 6295(s))

Federal energy efficiency requirements for covered products established under EPCA generally supersede State laws and regulations concerning energy and water conservation testing, labeling, and standards. (42 U.S.C. 6297) DOE may, however, grant waivers of Federal preemption for particular State laws or regulations, in accordance with the procedures and other provisions of EPCA. (42 U.S.C. 6297(d))

Under 42 U.S.C. 6293, EPCA sets forth the criteria and procedures DOE must follow when prescribing or amending test procedures for covered products. First, EPCA requires that any test procedures prescribed or amended under this section shall be reasonably designed to produce test results which measure energy efficiency, energy use

[3] The term "energy conservation standard" includes water use standards for showerheads, faucets, water closets and urinals. (42 U.S.C. 6291(6)(A))

water use (for plumbing products such as water closets and urinals), or estimated annual operating cost of a covered product during a representative average use cycle (as determined by the Secretary) or period of use. (42 U.S.C. 6293(b)(3)) Second, any test procedure shall not be unduly burdensome to conduct.

EPCA also requires that, at least once every 7 years, DOE evaluate test procedures for each type of covered product, including water closets and urinals, to determine whether amended test procedures would more accurately or fully comply with the requirements for the test procedures to not be unduly burdensome to conduct and be reasonably designed to produce test results that reflect water use, and estimated operating costs during a representative average use cycle or period of use. (42 U.S.C. 6293(b)(1)(A))

If the Secretary determines, on her own behalf or in response to a petition by any interested person, that a test procedure should be prescribed or amended, the Secretary shall promptly publish in the *Federal Register* proposed test procedures and afford interested persons an opportunity to present oral and written data, views, and arguments with respect to such procedures. The comment period on a proposed rule to amend a test procedure shall be at least 60 days and may not exceed 270 days. In prescribing or amending a test procedure, the Secretary shall take into account such information as the Secretary determines relevant to such procedure, including technological developments relating to energy or water use or energy efficiency of the type (or class) of covered products involved. (42 U.S.C. 6293(b)(2)). If DOE determines that test procedure revisions are not appropriate, DOE must publish its determination not to amend the test procedures.

EPCA also directs that the test procedures for water closets and urinals are to be the test procedures specified in American Society of Mechanical Engineers ("ASME") A112.19.6–1990, "Hydraulic Requirements for Water Closets and Urinals" ("ASME A112.19.6–1990"). (42 U.S.C. 6293(b)(8)(A)) EPCA further directs that, if the requirements of ASME A112.19.6–1990 are revised at any time and approved by the American National Standards Institute ("ANSI"), DOE must amend the Federal test procedures to conform to the revised ASME/ANSI standard, unless DOE determines by rule that to do so would not meet the requirements of EPCA that the test procedures be reasonably designed to produce test results which measure water use during a representative average use cycle as determined by DOE, and not be unduly burdensome to conduct. (42 U.S.C. 6293(b)(8)(B)) If DOE determines that a test procedure amendment is warranted, it must publish proposed test procedures and offer the public an opportunity to present oral and written comments on them. (42 U.S.C. 6293(b)(2))

DOE is publishing this final rule in satisfaction of these requirements under EPCA. (42 U.S.C. 6293(b)(1)(A) and (b)(8)(B))

B. Background

DOE's test procedures for water closets and urinals are found in 10 CFR 430.23(u) and (v), respectively, and appendix T.

On May 20, 2021, DOE published a notice of proposed rulemaking ("NOPR") presenting DOE's proposals to amend the water closets and urinals test procedures ("May 2021 NOPR"). 86 FR 27281. DOE held a public meeting related to this NOPR on June 16, 2021.

DOE received comments in response to the May 2021 NOPR from the interested parties listed in Table I.1.[4]

Table I.1 Written Comments Received in Response to May 2021 NOPR

Commenter	Referenced in this NOPR	Categorization
Pacific Gas and Electric Company, San Diego Gas and Electric, and Southern California Edison (collectively, the California Investor-Owned Utilities)	CA IOUs	Utility Companies
Natural Resources Defense Council, Appliance Standards Awareness Project	NRDC and ASAP	Efficiency Advocacy Organizations
Plumbing Manufacturers International	PMI	Trade Association

A parenthetical reference at the end of a comment quotation or paraphrase provides the location of the item in the public record.[5]

II. Synopsis of the Final Rule

In this final rule, DOE amends 10 CFR 430.2 (Definitions), 10 CFR 430.3 (Materials Incorporated by Reference), and appendix T as follows:

(1) Incorporate by reference ASME A112.19.2-2018, "Ceramic plumbing fixtures," with additional clarifying edits in appendix T;

(2) Replace the current term "toilet" with "water closet;" "blowout toilet" and "blowout water closet" with "blowout bowl water closet;" "gravity tank-type toilet" with "gravity flush tank water closet;" and "siphonic water closet" with "siphonic bowl water closet;" and

[4] DOE also received one anonymous comment that stated the following: "I think it's a good idea," which is not presented in the Table I.1.

[5] The parenthetical reference provides a reference for information located in the docket of DOE's rulemaking to develop test procedures for water closets and urinals. (Docket No. EERE-2017-BT-TP-0028, which is maintained at *www.regulations.gov*). The references are arranged as follows: (commenter name, comment docket ID number, page of that document).

(3) Add terms and corresponding definitions for "blowout bowl," "blowout action," "gravity flush tank water closet," "siphonic action," "siphonic bowl," and "trough-type urinal."

The adopted amendments are summarized in Table II.1 compared to the test procedure provision prior to the amendment, as well as the reason for the adopted change.

Table II.1 Summary of Changes in the Amended Test Procedures

DOE Test Procedures	Amended Test Procedures	Reason for the Change
Incorporates the 2008 version of ASME A112.19.2 for measurement of water consumption.	Incorporates the 2018 version of ASME A112.19.2, with additional clarifying edits to appendix T.	Industry TP update to ASME A112.19.2-2018.
Refers to both "toilet" and "water closet" but only defines "water closet"	Replaces "toilet" with "water closet"	Harmonizes terms and definitions with ASME A112.19.2-2018.
Defines and refers to and the term "blowout toilet."	Defines the term "blowout bowl," and refers to the term "blowout bowl water closet" in lieu of "blowout toilet" and "blowout water closet." Additionally, defines the term "blowout action," which is included within the definition of "blowout bowl."	Harmonizes terms and definitions with ASME A112.19.2-2018.
Refers to the terms "gravity flush tank water closet" and "siphonic bowl," but does not define either term.	Defines the terms "gravity flush tank water closet" and "siphonic bowl." Refers to the term "gravity flush tank water closet" in lieu of "gravity flush tank-type toilet." Refers to the term "siphonic bowl water closet" in lieu of "siphonic water closet." Additionally, defines the term "siphonic action," which is included within the definition of "siphonic bowl."	Harmonizes definitions with ASME A112.19.2-2018.
Refers to the term "trough-type urinal," but does not define it.	Defines the term "trough-type urinal."	Harmonizes the definition of the term with stakeholder recognized definition.

DOE has determined that the amendments described in section III and adopted in this document will not alter the measured water use of water closets and urinals, or require retesting or recertification solely as a result of DOE's adoption of the amendments to the test procedures. Additionally, DOE has determined that the amendments will not

increase the cost of testing. Discussion of DOE's actions are addressed in detail in section III of this document.

The effective date for the amended test procedures adopted in this final rule is 30 days after publication of this document in the *Federal Register*. Representations of water use or efficiency must be based on testing in accordance with the amended test procedures beginning 180 days after the publication of this final rule.

III. Discussion

A. Scope of Applicability

This final rule applies to both water closets and urinals, as defined in 10 CFR 430.2. DOE defines a "water closet" as a plumbing fixture that has a water-containing receptor that receives liquid and solid body waste, and upon actuation, conveys the waste through an exposed integral trap seal into a gravity drainage system, except such term does not include fixtures designed for installation in prisons. 10 CFR 430.2. DOE defines a "urinal" as a plumbing fixture that receives only liquid body waste and, on demand, conveys the waste through a trap seal into a gravity drainage system, except such term does not include fixtures designed for installations in prisons. *Id*.

B. Updates to Industry Test Standards

DOE's test procedures for water closets and urinals in appendix T incorporate by reference ASME A112.19.2-2008,[6] sections 7.1, 7.1.1, 7.1.2, 7.1.3, 7.1.4, 7.1.5, 7.4, 8.2, 8.2.1, 8.2.2, 8.2.3, 8.6, 8.6.4, Table 5 and Table 6. These sections and tables provide

[6] This reference includes Update No. 1, dated August 2009, and Update No. 2, dated March 2011.

procedures for testing and measuring water consumption, specifications for test apparatus, and other general requirements for the testing of water closets and urinals.

ASME A112.19.2-2018, the current version of the industry test standard, amends pertinent sections of the 2008 version incorporated into 10 CFR part 430. These amendments include (1) editorial changes and clarification in sections 7.1.2, 7.3.2,[7] 8.6.4, and Figure 12[8]; (2) a correction in section 8.2.1 to the water consumption static test pressure value for urinals to reflect the corresponding value in Table 6; and (3) additions to Table 5 that are not relevant to the water consumption test for water closets. In the May 2021 NOPR, DOE had tentatively determined that the amendments would not impact the measured values of water use for water closets and urinals under appendix T, the representativeness of the results, or the test burden. Accordingly, DOE proposed to incorporate by reference ASME A112.19.2-2018 and requested comment. 86 FR 27281, 27284.

The CA IOUs and PMI recommended that DOE incorporate the latest version of the industry test standard, ASME A112.19.2-2018. (CA IOUs, No. 11 at p. 2; PMI, No. 13 at p. 1) DOE did not receive any other comments regarding the industry standard update. For the reasons discussed in the May 2021 NOPR and presented in the preceding paragraphs, in this final rule DOE incorporates by reference the latest industry test standard, ASME A112.19.2-2018.

DOE also proposed in the May 2021 NOPR to remove references to Sections 7.1 and 8.2 of ASME A112.19.2-2018 in appendix T because those sections were

[7] The water consumption test is in Section 7.4 in ASME A112.19.2-2008, but Section 7.3 in ASME A112.19.2-2018.

[8] While Figure 12 is not incorporated by reference in 10 CFR 430.3(h)(2), Figure 12 is referenced within section 7.1.1, which is incorporated by reference.

superfluous and did not provide specifications needed for performing the DOE test procedures. DOE requested comments on the proposal. 86 FR 27281, 27284-27285. DOE did not receive any comments on this proposal. DOE removes these superfluous references in this final rule as proposed in the May 2021 NOPR.

C. Definitions

Several terms and definitions in ASME A112.19.2-2018 relevant to water closets and urinals vary from those in DOE regulations, including terms not defined in 10 CFR 430.2. In the May 2021 NOPR, DOE proposed amendments to a number of definitions, which are presented in Table III.1, and requested comment on the proposed definitions. 86 FR 27281, 27285-27287.

Table III.1 Water Closets and Urinals: Terms and Definitions

Term	Usage in appendix T, 10 CFR 430.32(q) or 10 CFR 430.32(r)	DOE Definition (10 CFR 430.2)	ASME Definition (A112.19.2-2018)	DOE's Proposal
Toilet	10 CFR 430.32(q).	None.	None.	Replace term with "water closet."
Electromechanical hydraulic toilet	10 CFR 430.32(q).	A water closet that utilizes electrically operated devices such as, but not limited to, air compressors, pumps, solenoids, motors, or macerators in place of or to aid gravity in evacuating waste from the toilet.	None.	Replace term with "electromechanical hydraulic water closet" while maintaining existing definition.
Electro-hydraulic water closet	Not used.	None.	A water closet with a nonmechanical trap seal incorporating an electric motor and controller to facilitate flushing.	No update.
Blowout bowl	appendix T.	None.	A non-siphonic water closet bowl with an integral flushing rim, a trap at the rear of the bowl, and a visible or concealed jet that operates with a blowout action.	Adopt ASME A112.19.2-2018 definition.

Blowout action	Not used.	None.	A means of flushing a water closet whereby a jet of water directed at the bowl outlet opening pushes the bowl contents into the upleg, over the weir, and into the gravity drainage system.	Adopt ASME A112.19.2-2018 definition.
Blowout toilet	10 CFR 430.32(q).	A water closet that uses a non-siphonic bowl with an integral flushing rim, a trap at the rear of the bowl, and a visible or concealed jet that operates with a blowout action.	None.	Replace term with "blowout bowl water closet."
Blowout water closet	appendix T.	None.	None.	Replace term with "blowout bowl water closet."
Gravity flush tank water closet	appendix T.	None.	A water closet designed to flush the bowl with water supplied by gravity only.	Adopt ASME A112.19.2-2018 definition.
Gravity tank-type toilet	10 CFR 430.32(q).	None.	None.	Replace term with "gravity flush tank water closet."
Siphonic bowl	appendix T.	None.	A water closet bowl that has an integral flushing rim, a trap at the front or rear, and a floor or wall outlet, and operated with a siphonic action (with or without a jet).	Adopt ASME A112.19.2-2018 definition.
Siphonic action	Not used.	None.	The movement of water through a flushing fixture by creating a siphon to remove waste material.	Adopt ASME A112.19.2-2018 definition.
Siphonic water closet	appendix T.	None.	None.	Replace term with "siphonic bowl water closet."
Trough-type urinal	10 CFR 430.32(r).	None.	None.	Adopt California's regulatory definition ("a urinal designed for simultaneous use by two or more persons.")

In response to the May 2021 NOPR, the CA IOUs expressed support for the proposed definitions. (CA IOUs, No. 11 at p. 1) DOE did not receive any other

comments on the proposed terms and definitions. In this final rule, DOE incorporates the terms and definitions as proposed in the May 2021 NOPR. DOE has determined that the amendments to the terms and definitions adopted in this final rule provide greater consistency with the referenced industry standard and avoid potential confusion in the use of the terms.

D. Test Pressure

Sections 3.a.(ii) and 3.b of appendix T require water closets and urinals to be tested at various test pressures, as specified in Table III.2. Sections 3.a.(ii) and 3.b of appendix T also requires that a test be performed three times at each required pressure. The final measured flush volume for each tested unit is the average of the total flush volumes recorded at all test pressures.

Table III.2 Required Test Pressures in appendix T

Product Configuration	Test Pressures (pounds per square inch ("psi"))
Flushometer valve water closets with siphonic bowl	35, 80
Flushometer valve water closets with a blowout bowl	45, 80
Tank-type water closets	20, 50, 80
Urinals	25, 80

In the May 2021 NOPR, DOE proposed to maintain the water pressure and averaging requirements in appendix T, consistent with the industry test standard requirements. 86 FR 27281, 27285, 27288.

NRDC and ASAP commented that averaging the high and low water pressure may not make the test procedure representative of installations in higher pressure

locations. They cited water loss audit reports in Pennsylvania[9] and New Jersey[10] showing that both states reported a minimum system pressure of 40 psi; a median system pressure of 75 and 58 psi, respectively; a 90th percentile system pressure of 100 and 82 psi, respectively; and a maximum system pressure of 150 and 140 psi, respectively. NRDC and ASAP asserted that since no system in either state reported an average system pressure of less than 40 psi, giving equal weight to results of the tests conducted at 20, 25, or 35 psi with test results conducted at 80 psi could not possibly provide a representation of most real-world conditions. NRDC and ASAP further cited data compiled by the American Water Works Association, showing data from California, Georgia, and Quebec, which reported higher system water pressures than the DOE test procedures.[11] They argued that to the extent that the operation of some flushometer valves is significantly impacted by water line pressure at the point of installation, a higher pressure contributes to higher water consumption, and asserted that the averaging of high and low test pressure results may mask non-compliance by water closets and urinals when installed at higher pressure locations. NRDC and ASAP recommended that DOE require that the test results at each test pressure be subject to the maximum flush volume of the standard, rather than averaging water consumption across all test pressures to determine compliance with the standard. NRDC and ASAP asserted that since such a change would be a revision in the calculation of test data, it would therefore not impose any additional testing burden on manufacturers. (NRDC and ASAP, No. 12 at pp. 3-5)

[9] Kunkel Water Efficiency Consulting. 2017. Report on the Evaluation of Water Audit Data for Pennsylvania Water Utilities. *www.nrdc.org/resources/report-evaluation-water-audit-data-pennsylvania-water-utilities*

[10] Kunkel Water Efficiency Consulting. 2017. Report on the Evaluation of Water Audit Data for New Jersey Water Utilities. *www.nrdc.org/sites/default/files/nj-utilities-water-audit-data-evaluation-20170110.pdf*

[11] Water Audit Reference dataset ("WARD") summary data is accessible at *www.awwa.org/Resources-Tools/Resource-Topics/Water-Loss-Control/Free-Water-Audit-Software*.

PMI commented that DOE's current test method of averaging results at different test pressure should remain unchanged. PMI stated that the requirements are consistent with the industry standards, and that any deviations from these requirements could result in an unnecessary cost burden to manufacturers. (PMI, No. 12 at p. 1)

DOE carefully reviewed the data provided by NRDC and ASAP. DOE notes that the water pressures identified in the datasets provided are system pressures (*i.e.*, pressure at the utility), and not the pressures at the point of installation, where water closets and urinals are connected. The water pressure within the system lines may not correspond to the water pressure at the point of installation of products within a building, as explained in the following paragraphs. As such, the range of system pressures presented is not directly relevant to appropriate test pressure for water closets and urinals.

DOE does not have data and is not aware of national level data regarding the range of water pressures at point of product installation. However, the range of pressures specified in the DOE test procedures (*i.e.*, 20 psi minimum to 80 psi maximum) represent the range of pressures expected to be experienced at the point of product installation, for the reasons that follow. In locations at which the system pressure is greater than 80 psi, pressure reducing valves would likely be used to prevent damage to customer plumbing, hot water heaters, and other customer devices.[12] This supports using 80 psi as the maximum test pressure required for appendix T, absent point-of-installation data. Relevant to the defining minimum test pressures, DOE notes that water pressure within a building may vary based on location of installation (*i.e.*, water pressure typically

[12] Per the 2021 Uniform Plumbing Code ("UPC")—which represents the most current approaches in the plumbing field, is developed under the American National Standards Institute ("ANSI") Consensus process, and is designated as an American National Standard by ANSI—for water supply piping exceeding 80 psi, an "approved-type pressure regulator preceded by an adequate strainer shall be installed and the static pressure reduced to 80 psi or less."

decreases at upper building levels). Additionally, water pressure may fluctuate based on water demand within a building at the time of use (*e.g.*, multiple water consuming appliances being operated at the same time).

Both the Pennsylvania and New Jersey reports discuss that the "Ten State Standards"[13] stipulate that water systems "shall be designed to maintain a minimum pressure of 20 psi at ground level at all points in the distribution system under all conditions of flow." This supports using 20 psi as the minimum test pressure required for appendix T (for tank-type water closets), absent point-of-installation data.

EPCA requires that the test procedures for water closets and urinals be reasonably designed to produce test results which reflect water use during a representative average use cycle. (42 U.S.C. 6293(b)(3)) As discussed, the water pressure at point of installation of water closet or urinal may vary from location to location and may also vary at a given location depending on competing water demands at the time of operation. Commenters' suggestion to require compliance at each test pressure would effectively result in test measurements representative of operation at the upper and lower ends of the range of pressures expected in the field, rather than reflecting representative average performance across the range of varying water pressures. Moreover, commenters' suggestion would effectively result in a water closet or urinal basic model being subject to more than one standard, without clear statutory authorization for more than one standard for this product. (See 42 U.S.C. 6292(6)(a)). Therefore, in this final rule, DOE is maintaining the current test pressures and the requirement to average flush volume across test pressures.

[13] "Water Supply Committee of the Great Lakes–Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers Recommended Standards for Water Works".

In the May 2021 NOPR, DOE also proposed to remove the static pressure requirements for flushometer valve water closets (with a siphonic bowl and blowout bowl) in section 3.a.(ii) of appendix T, and instead reference the static pressure requirement provided in Table 5 of ASME A112.19.2–2018. DOE noted that the static pressure was specified in appendix T only because ASME A112.19.2-2008 (the version of the standard incorporated by reference in appendix T) published incorrect static pressure requirements for flushometer valve water closets; however, this is now corrected in ASME A112.19.2–2018. Finally, in Section 3.b of appendix T, DOE proposed to replace the reference to Section 8.6.4 of ASME A112.19.2-2008 with Table 6 of ASME A112.19.2-2018 to directly reference the test pressures. DOE noted that while Section 8.6.4 references Table 6 for the required test pressures, Section 8.6.4 also provides performance specifications that are not relevant for the purpose of meeting DOE water use standards in 10 CFR 430.32(r). DOE requested comment on all the proposals. 86 FR 27281, 27285, 27288-27289. DOE did not receive any specific comments on these proposals. For the reasons discussed in this paragraph and in the May 2021 NOPR, DOE incorporates these edits in this final rule.

E. Additional Directions Regarding Recorded & Calculated Values

Appendix T provides additional direction regarding the resolution of the recorded values; rounding of recorded and calculated values; and test set-up as it relates to manufacturer installation instructions, which are not specified in the industry test standard, but needed for compliance purposes. In the May 2021 NOPR, DOE proposed to maintain the additional direction in appendix T. 86 FR 27281, 27289. In response, NRDC and ASAP agreed that the additional directions to the industry standard in

appendix T need to be maintained. (NRDC and ASAP, No. 12 at p. 1) DOE continues to maintain the additional directions in this final rule.

DOE also received several comments in response to the May 2021 NOPR regarding the instrument resolution required by the ASME and DOE test procedures. NRDC and ASAP commented that the ASME standard requires an apparatus capable of reading increments not exceeding 0.07 gallons and this lets the results of each test run be rounded down to the nearest 0.07 gallons. NRDC and ASAP asserted that this allows results that may not be representative, or results that may mask differences in performance between models, and allows products to exceed the standard by 0.07 gallons per flush. They noted that the DOE certification reports require rounding to the nearest 0.01 gallons. Accordingly, NRDC and ASAP recommended that DOE increase the required resolution of the test procedure water use measurement to 0.01 gallons and require rounding the test results to the nearest 0.01 gallons. Alternatively, they commented that absent more precise measurement increments, DOE should consider increasing the number of repetitions at each pressure to five tests and require five models to be tested for each basic model. (Efficiency Advocates, No. 12 at pp. 1-3)

PMI opposed DOE implementing an instrument resolution of 0.01 gallons and urged DOE to maintain the current resolution specifications. PMI stated that changing the industry standard specification of rounding down to the nearest 0.07 gallon would cause some water closets that are currently compliant with standards to no longer be compliant. PMI stated that although the instruments and equipment have a resolution of 0.01 gallons and fall within the tolerances of calibration, fill valves on plumbing products are inexact and often have variations between flushes that are greater than 0.01 gallons. PMI stated that this is impacted by the water line and by manufacturing tolerances. PMI

asserted that manufacturers need to be able to round down the total flush volume to the nearest 0.07 gallons to account for such factors. PMI stated that changing the current instrument resolution of 0.07 to a value of 0.01 to match the DOE reporting requirements would require manufacturers and test labs to provide additional investments in equipment and training, as well as the necessary re-testing and re-certification. PMI stated that it is unaware of any effort to subvert the water saving goals provided by the current test procedures, and that third party testing and certification requirements in Section 7.3 of ASME A112.19.2/CSA B45.1 adds additional layers of safeguards against such manipulation. (PMI, No. 13 at p. 2)

The rounding resolution in Sections 7.3.2 and 8.6.1 of ASME A112.19.2-2018 reflects the resolution specifications of the equipment required for use in the test procedures, including the receiving vessel, the load cell and other apparatus capable of measuring volumes (at 0.07 gallons, or 0.25 liters). As noted by PMI, although the instruments and equipment used in testing often have a resolution of 0.01 gallons, the larger tolerance at 0.07 gallons is to allow variations with inexact fill valves and manufacturing tolerances. Further, Section 7.3.3 and 8.6.2 of ASME A112.19.2-2018 requires that the tests be repeated three times at each of the test pressures. In addition, DOE sampling requirements for represented values of water consumption require that the minimum number of units tested shall be no fewer than two. *See* 10 CFR 429.30 and 10 CFR 429.31. As discussed in the May 2021 NOPR, a basic model must comply with the applicable energy conservation standard to be distributed in commerce. Individual test measurements may vary within the sample for a given basic model, but all of the measurement cannot systemically test more consumptive than the standard when certification testing is being conducted in order to obtain a valid representation. With no

fewer than two sample units per basic model and three runs per unit, DOE believes the variation in the final represented value will be minimal.

Consistent with comments from PMI, DOE has no evidence to suggest that manufacturers are using rounding requirements as a means to exploit compliance with water conservation standards for these products. DOE expects that changes in equipment resolution and rounding requirements or any considerations to increase repetitions at each pressure would require currently certified water closets and urinals to be retested and recertified. Requiring improved resolution or more tests would create additional manufacturer burden without clear benefits, given the testing and sampling requirements discussed. For all the reasons presented, DOE is maintaining the current specifications in appendix T regarding measurement and rounding specifications.

F. Connected and Electronic Products

In response to the May 2021 NOPR, CA IOUs commented that they support DOE continuing to evaluate integrating connected (*i.e.*, Smart Technology) products. They also stated that in part due to the COVID-19 Pandemic, they expect more widespread adoption of electronic, hand-free flushing operations for water closets and urinals. As such, they are concerned that future demand may increase standby energy consumption in the future. They encouraged DOE to further evaluate touchless technology and sensors including ultrasonic, mechanical vibration-based approaches, and radio-frequency identification readers. However, CA IOUs commented that they do not believe the current test procedures impedes any advances in "smart" functionalities. (CA IOUs, No. 11 at p. 3) At this time, DOE is not making any changes to the test procedures to

incorporate “smart” functionalities or electronic operation but will continue to evaluate any new technologies in future rulemakings.

G. Clarifications to 10 CFR 430.23 and Appendix T

In the May 2021 NOPR, DOE proposed to replace the language “the maximum permissible water use allowed” in 10 CFR 430.23(u) and 10 CFR 430.23(v) with “the water use”. DOE noted that this amendment would clarify that the DOE test procedures measure water use, whereas the standards in 10 CFR 430.32(q) and (r) establish the maximum allowable water use for water closets and urinals, respectively. DOE requested comment on this proposal. 86 FR 27281, 27290. DOE did not receive any comments on this proposal. For the reasons discussed in the May 2021 NOPR, DOE incorporates these edits in this final rule.

In this final rule, DOE has also modified 10 CFR 430.23(q) to incorporate all water closet types and their maximum flush rates into one centralized table. The dates when each energy conservation standards are applicable are shown in the table. This section was updated for ease of reading and added clarity only. DOE notes that the energy conservation standards based on each water closet type remains unchanged with this update.

In this final rule, DOE has also added additional clarification in appendix T to describe that when measuring the flush volume at a given pressure, manufacturers are to average the individual flush volumes at a given pressure from the three tests. The final measured flush volume for each unit, is the average of the total flush volumes recorded at each test pressure. This update aligns with the industry standard and does not change current practices. The additions only provide clarity to the order of averaging tests when

conducting the flush volume test for water closets and urinals. As such, DOE has adopted these clarifications in this final rule.

Lastly, in this final rule, DOE has made minor editorial changes to some of the language in appendix T to improve readability. This includes text consistent with ASME A112.19.2-2018 clarifying the sequence of averaging and converting the water closet standards from text into a chart substantively the same as the proposed regulatory text. These edits do not impact the results of the test procedure and as such, are adopted in this final rule.

H. Test Procedure Costs

In this final rule, DOE amends the test procedures for water closets and urinals to reference the most recent update to the relevant industry standard, ASME 112.19.2-2018. In addition, DOE is also amending certain definitions, and adding definitions for a number of terms which are currently used in the Federal test procedures but not defined. The adopted amendments are consistent with current industry standards, and therefore would not impact the measured values of water use for water closets and urinals under appendix T, assuming current industry practice is to follow those standards. In accordance with EPCA, DOE has determined that these adopted amendments will not be unduly burdensome for manufacturers to conduct. Further, DOE has determined that the adopted test procedure amendments will not impact testing costs already experienced by manufacturers.

I. Effective and Compliance Dates

The effective date for the adopted test procedure amendment will be 30 days after publication of this final rule in the *Federal Register*. EPCA prescribes that all representations of energy efficiency and energy use, including those made on marketing materials and product labels, must be made in accordance with an amended test procedure, beginning 180 days after publication of the final rule in the *Federal Register*. (42 U.S.C. 6293(c)(2)) EPCA provides an allowance for individual manufacturers to petition DOE for an extension of the 180-day period if the manufacturer may experience undue hardship in meeting the deadline. (42 U.S.C. 6293(c)(3)) To receive such an extension, petitions must be filed with DOE no later than 60 days before the end of the 180-day period and must detail how the manufacturer will experience undue hardship. (*Id*.)

IV. Procedural Issues and Regulatory Review

A. Review Under Executive Order 12866

The Office of Management and Budget ("OMB") has determined this test procedure rulemaking does not constitute a "significant regulatory action" under section 3(f) of Executive Order ("E.O.") 12866, Regulatory Planning and Review, 58 FR 51735 (Oct. 4, 1993). Accordingly, this action was not subject to review under the Executive Order by the Office of Information and Regulatory Affairs ("OIRA") in OMB.

B. Review Under the Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq*.) requires preparation of a final regulatory flexibility analysis (FRFA) for any final rule where the agency was first required by law to publish a proposed rule for public comment, unless the agency

certifies that the rule, if promulgated, will not have a significant economic impact on a substantial number of small entities. As required by Executive Order 13272, "Proper Consideration of Small Entities in Agency Rulemaking," 67 FR 53461 (August 16, 2002), DOE published procedures and policies on February 19, 2003 to ensure that the potential impacts of its rules on small entities are properly considered during the DOE rulemaking process. 68 FR 7990. DOE has made its procedures and policies available on the Office of the General Counsel's website: *energy.gov/gc/office-general-counsel*.

In the May 2021 NOPR, DOE tentatively concluded that the impacts of the test procedure amendments proposed in the NOPR would not have a "significant economic impact on a substantial number of small entities," and that the preparation of an initial regulatory flexibility analysis (IRFA) was not warranted, and that DOE would transmit the certification and supporting statement of factual basis to the Chief Counsel for Advocacy of the Small Business Administration for review.

As stated, the amendments adopted in this final rule amend the test procedures for water closets and urinals, consistent with the most recent version of the referenced industry standard. In addition, DOE amends certain definitions, and adds definitions for the terms currently used in the Federal test procedures, but not currently defined. DOE has determined that the adopted test procedure amendments would not impact testing costs already experience by manufacturers.

The amendments adopted in this final rule would not have significant economic impact on small businesses. The Small Business Administration ("SBA") considers a business entity to be a small business, if, together with its affiliates, it employs less than a threshold number of workers or earns less than the average annual receipts specified in 13

CFR part 121. The threshold values set forth in these regulations use size standards and codes established by the North American Industry Classification System ("NAICS").[14] DOE used three NAICS codes to cover all potential products for this rulemaking: 327110 (pottery, ceramics, and plumbing fixture manufacturing); 326191 (plastics plumbing fixture manufacturing); 332999 (all other miscellaneous fabricated metal product manufacturing). The threshold for NAICS classification code 327110 (pottery, ceramics, and plumbing fixture manufacturing), which includes most urinals and water closets covered by this rulemaking, is 1,000 employees or fewer. The threshold for NAICS classification codes 326191 (plastics plumbing fixture manufacturing) and 332999 (all other miscellaneous fabricated metal product manufacturing) is 750 employees or fewer. Since NAICS classification code 327110 includes the majority of water closet and urinal manufacturing and DOE assumes that most, if not all, water closet and urinal manufacturers make at least some products covered by that NAICS classification code, DOE used the more conservative 1,000 employee threshold value for this regulatory flexibility analysis.

DOE collected data from DOE's compliance certification database to identify manufacturers of water closets and urinals.[15] DOE then consulted publicly-available data and contacted manufacturers, where needed, to determine if they meet the SBA's definition of a "small business" and have their manufacturing facilities located within the United States. Based on this analysis, DOE identified 19 small businesses that manufacture either water closets or urinals covered by the proposed test procedures. As noted previously, DOE concluded in the May 2021 NOPR that the proposed amendments to the test procedure would not have a "significant economic impact on a substantial

[14] The size standards are listed by NAICS code and industry description and are available at: *www.sba.gov/document/support--table-size-standards* (Last accessed on December 1, 2021).
[15] Certified equipment in the CCD are listed by product class and can be accessed at *www.regulations.doe.gov/certification-data/#q=Product_Group_s%3A** (Last accessed December 1, 2021)

number of small entities" because the amendments to the test procedure are largely updates to harmonize the DOE test procedure with the industry test procedure currently in use, and these updates will not increase the cost of testing nor require retesting and recertification of basic models.

For the same reasons discussed in the May 2021 NOPR, DOE concludes that the cost effects accruing from the final rule would not have a "significant economic impact on a substantial number of small entities," and that the preparation of a FRFA is not warranted. DOE has submitted a certification and supporting statement of factual basis to the Chief Counsel for Advocacy of the Small Business Administration for review under 5 U.S.C. 605(b).

C. Review Under the Paperwork Reduction Act of 1995

Manufacturers of water closets and urinals must certify to DOE that their products comply with any applicable energy conservation standards. To certify compliance, manufacturers must first obtain test data for their products according to the DOE test procedures, including any amendments adopted for those test procedures. DOE has established regulations for the certification and recordkeeping requirements for all covered consumer products and commercial equipment, including water closets and urinals. (*See generally* 10 CFR part 429.) The collection-of-information requirement for the certification and recordkeeping is subject to review and approval by OMB under the Paperwork Reduction Act (PRA). This requirement has been approved by OMB under OMB control number 1910-1400. Public reporting burden for the certification is estimated to average 35 hours per response, including the time for reviewing instructions,

searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the PRA, unless that collection of information displays a currently valid OMB Control Number.

D. Review Under the National Environmental Policy Act of 1969

In this final rule, DOE establishes test procedure amendments that it expects will be used to develop and implement future energy conservation standards for water closets and urinals. DOE has determined that this rule falls into a class of actions that are categorically excluded from review under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq*.) and DOE's implementing regulations at 10 CFR part 1021. Specifically, DOE has determined that adopting test procedures for measuring energy efficiency of consumer products and industrial equipment is consistent with activities identified in 10 CFR part 1021, appendix A to subpart D, A5 and A6. Accordingly, neither an environmental assessment nor an environmental impact statement is required.

E. Review Under Executive Order 13132

Executive Order 13132, "Federalism," 64 FR 43255 (August 4, 1999), imposes certain requirements on agencies formulating and implementing policies or regulations that preempt State law or that have Federalism implications. The Executive order requires agencies to examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the States and to carefully assess

the necessity for such actions. The Executive order also requires agencies to have an accountable process to ensure meaningful and timely input by State and local officials in the development of regulatory policies that have Federalism implications. On March 14, 2000, DOE published a statement of policy describing the intergovernmental consultation process it will follow in the development of such regulations. 65 FR 13735. DOE examined this final rule and determined that it will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. EPCA governs and prescribes Federal preemption of State regulations as to energy conservation for the products that are the subject of this final rule. States can petition DOE for exemption from such preemption to the extent, and based on criteria, set forth in EPCA. (42 U.S.C. 6297(d)) No further action is required by Executive Order 13132.

F. Review Under Executive Order 12988

Regarding the review of existing regulations and the promulgation of new regulations, section 3(a) of Executive Order 12988, "Civil Justice Reform," 61 FR 4729 (Feb. 7, 1996), imposes on Federal agencies the general duty to adhere to the following requirements: (1) eliminate drafting errors and ambiguity; (2) write regulations to minimize litigation; (3) provide a clear legal standard for affected conduct rather than a general standard; and (4) promote simplification and burden reduction. Section 3(b) of Executive Order 12988 specifically requires that Executive agencies make every reasonable effort to ensure that the regulation (1) clearly specifies the preemptive effect, if any; (2) clearly specifies any effect on existing Federal law or regulation; (3) provides a clear legal standard for affected conduct while promoting simplification and burden reduction; (4) specifies the retroactive effect, if any; (5) adequately defines key terms;

and (6) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. Section 3(c) of Executive Order 12988 requires executive agencies to review regulations in light of applicable standards in sections 3(a) and 3(b) to determine whether they are met, or it is unreasonable to meet one or more of them. DOE has completed the required review and determined that, to the extent permitted by law, this final rule meets the relevant standards of Executive Order 12988.

G. Review Under the Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 ("UMRA") requires each Federal agency to assess the effects of Federal regulatory actions on State, local, and Tribal governments and the private sector. Pub. L. 104-4, sec. 201 (codified at 2 U.S.C. 1531). For a regulatory action resulting in a rule that may cause the expenditure by State, local, and Tribal governments, in the aggregate, or by the private sector of $100 million or more in any one year (adjusted annually for inflation), section 202 of UMRA requires a Federal agency to publish a written statement that estimates the resulting costs, benefits, and other effects on the national economy. (2 U.S.C. 1532(a), (b)) The UMRA also requires a Federal agency to develop an effective process to permit timely input by elected officers of State, local, and Tribal governments on a proposed "significant intergovernmental mandate," and requires an agency plan for giving notice and opportunity for timely input to potentially affected small governments before establishing any requirements that might significantly or uniquely affect small governments. On March 18, 1997, DOE published a statement of policy on its process for intergovernmental consultation under UMRA. 62 FR 12820; also available at *http://energy.gov/gc/office-general-counsel*. DOE examined this final rule according to

UMRA and its statement of policy and determined that the rule contains neither an intergovernmental mandate, nor a mandate that may result in the expenditure of $100 million or more in any year, so these requirements do not apply.

H. Review Under the Treasury and General Government Appropriations Act, 1999

Section 654 of the Treasury and General Government Appropriations Act, 1999 (Pub. L. 105-277) requires Federal agencies to issue a Family Policymaking Assessment for any rule that may affect family well-being. This final rule will not have any impact on the autonomy or integrity of the family as an institution. Accordingly, DOE has concluded that it is not necessary to prepare a Family Policymaking Assessment.

I. Review Under Executive Order 12630

DOE has determined, under Executive Order 12630, "Governmental Actions and Interference with Constitutionally Protected Property Rights" 53 FR 8859 (March 18, 1988), that this regulation will not result in any takings that might require compensation under the Fifth Amendment to the U.S. Constitution.

J. Review Under Treasury and General Government Appropriations Act, 2001

Section 515 of the Treasury and General Government Appropriations Act, 2001 (44 U.S.C. 3516 note) provides for agencies to review most disseminations of information to the public under guidelines established by each agency pursuant to general guidelines issued by OMB. OMB's guidelines were published at 67 FR 8452 (Feb. 22, 2002), and DOE's guidelines were published at 67 FR 62446 (Oct. 7, 2002). Pursuant to OMB Memorandum M-19-15, Improving Implementation of the Information Quality Act

(April 24, 2019), DOE published updated guidelines which are available at *https://www.energy.gov/sites/prod/files/2019/12/f70/DOE%20Final%20Updated%20IQA%20Guidelines%20Dec%202019.pdf*. DOE has reviewed this final rule under the OMB and DOE guidelines and has concluded that it is consistent with applicable policies in those guidelines.

K. Review Under Executive Order 13211

Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use," 66 FR 28355 (May 22, 2001), requires Federal agencies to prepare and submit to OMB, a Statement of Energy Effects for any significant energy action. A "significant energy action" is defined as any action by an agency that promulgated or is expected to lead to promulgation of a final rule, and that (1) is a significant regulatory action under Executive Order 12866, or any successor order; and (2) is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (3) is designated by the Administrator of OIRA as a significant energy action. For any significant energy action, the agency must give a detailed statement of any adverse effects on energy supply, distribution, or use if the regulation is implemented, and of reasonable alternatives to the action and their expected benefits on energy supply, distribution, and use.

This regulatory action is not a significant regulatory action under Executive Order 12866. Moreover, it would not have a significant adverse effect on the supply, distribution, or use of energy, nor has it been designated as a significant energy action by the Administrator of OIRA. Therefore, it is not a significant energy action, and, accordingly, DOE has not prepared a Statement of Energy Effects.

L. Review Under Section 32 of the Federal Energy Administration Act of 1974

Under section 301 of the Department of Energy Organization Act (Pub. L. 95–91; 42 U.S.C. 7101), DOE must comply with section 32 of the Federal Energy Administration Act of 1974, as amended by the Federal Energy Administration Authorization Act of 1977. (15 U.S.C. 788; "FEAA") Section 32 essentially provides in relevant part that, where a proposed rule authorizes or requires use of commercial standards, the notice of proposed rulemaking must inform the public of the use and background of such standards. In addition, section 32(c) requires DOE to consult with the Attorney General and the Chairman of the Federal Trade Commission ("FTC") concerning the impact of the commercial or industry standards on competition.

The modifications to the test procedure for water closets and urinals adopted in this final rule incorporates testing methods contained in certain sections of the following commercial standards: ASME A112.19.2-2018. DOE has evaluated these standards and is unable to conclude whether it fully complies with the requirements of section 32(b) of the FEAA (*i.e.*, whether it was developed in a manner that fully provides for public participation, comment, and review.) DOE has consulted with both the Attorney General and the Chairman of the FTC about the impact on competition of using the methods contained in these standards and has received no comments objecting to their use.

M. Congressional Notification

As required by 5 U.S.C. 801, DOE will report to Congress on the promulgation of this rule before its effective date. The report will state that it has been determined that the rule is not a "major rule" as defined by 5 U.S.C. 804(2).

N. Description of Materials Incorporated by Reference

In this final rule, DOE incorporates by reference the test jointly published by the American Society of Mechanical Engineers ("ASME") and the Canadian Standards Association ("CSA Group") designated ASME A112.19.2-2018. ASME A112.19.2-2018 is an industry-accepted test procedure that measures water consumption for water closets and urinals, and is applicable to products sold in North America. Specifically, the test procedure codified by this final rule references various sections of ASME A112.19.2-2018 that address test setup, apparatus, test conduct, and calculations. These sections of ASME A112.19.2-2018 are Section 7.1.1 "All tests," Section 7.1.2 "Gravity flush tank water closets," Section 7.1.3 "Flushometer tank, electro-hydraulic, or other pressurized flushing device water closets," Section 7.1.4 "Flushometer valve water closets," Section 7.1.5 "Procedures for standardizing the water supply system," Section 7.3 "Water consumption test," Section 8.2.1, Section 8.2.2, and Section 8.2.3, Section 8.6 "Water Consumption Test," Table 5 "Static test pressures for water closets, kPa (psi)," and Table 6 "Static test pressures for urinals, kPa (psi)."

Copies of ASME A112.19.2-2018 may be purchased from the ASME at Three Park Avenue, New York, NY 10016, 1-800 843-2763, or by going to *https://www.asme.org/codes-standards/find-codes-standards/a112-19-2-csa-b45-1-ceramic-plumbing-fixtures?productKey=J0121TM1:J0121TM1*.

V. Approval of the Office of the Secretary

The Secretary of Energy has approved publication of this final rule.

List of Subjects in 10 CFR Part 430

Administrative practice and procedure, Confidential business information, Energy conservation, Household appliances, Imports, Incorporation by reference, Intergovernmental relations, Small businesses.

Signing Authority

This document of the Department of Energy was signed on March 17, 2022, by Kelly J. Speakes-Backman, Principal Deputy Assistant Secretary for Energy Efficiency and Renewable Energy, pursuant to delegated authority from the Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the *Federal Register*.

Signed in Washington, DC, on March 18, 2022.

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Treena V. Garrett
Federal Register Liaison Officer,
U.S. Department of Energy

For the reasons stated in the preamble, DOE amends 10 CFR part 430 as set forth below:

PART 430--ENERGY CONSERVATION PROGRAM FOR CONSUMER PRODUCTS

1. The authority citation for part 430 continues to read as follows:

Authority: 42 U.S.C. 6291–6309; 28 U.S.C. 2461 note.

2. Section 430.2 is amended by:

a. Adding in alphabetical order definitions for “Blowout action” and “Blowout bowl”;

b. Removing the definition for “Blowout toilet”;

c. Removing the definition of “Electromechanical hydraulic toilet” and adding in its place a definition for “Electromechanical hydraulic water closet”; and

d. Adding in alphabetical order definitions for “Gravity flush tank water closet”, “Siphonic action”, “Siphonic bowl”, and “Trough-type urinal”.

The additions read as follows:

§430.2 Definitions.

* * * * *

Blowout action means a means of flushing a water closet whereby a jet of water directed at the bowl outlet opening pushes the bowl contents into the upleg, over the weir, and into the gravity drainage system.

Blowout bowl means a non-siphonic water closet bowl with an integral flushing rim, a trap at the rear of the bowl, and a visible or concealed jet that operates with a blowout action.

* * * * *

Electromechanical hydraulic water closet means any water closet that utilizes electrically operated devices, such as, but not limited to, air compressors, pumps, solenoids, motors, or macerators in place of or to aid gravity in evacuating waste from the toilet bowl.

* * * * *

Gravity flush tank water closet means a water closet designed to flush the bowl with water supplied by gravity only.

* * * * *

Siphonic action means the movement of water through a flushing fixture by creating a siphon to remove waste material.

Siphonic bowl means a water closet bowl that has an integral flushing rim, a trap at the front or rear, and a floor or wall outlet, and operates with a siphonic action (with or without a jet).

* * * * *

Trough-type urinal means a urinal designed for simultaneous use by two or more people.

* * * * *

3. Section 430.3 is amended by revising paragraph (a) and the introductory text to paragraph (h) and adding paragraph (h)(3) to read as follows:

§430.3 Materials incorporated by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the U.S. Department of Energy (DOE) must publish a document in the Federal Register and the material must be available to the public. All approved material is available for inspection at the DOE and at the National Archives and Records Administration (NARA). Contact DOE at: the

U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, Sixth Floor, 950 L'Enfant Plaza SW, Washington, DC 20024, (202) 586-9127, *Buildings@ee.doe.gov*, *https://www.energy.gov/eere/buildings/appliance-and-equipment-standards-program*. For information on the availability of this material at NARA, email: *fr.inspection@nara.gov*, or go to: *www.archives.gov/federal-register/cfr/ibr-locations.html*. The material may be obtained from the sources in the following paragraphs of this section.

* * * * *

(h) *ASME*. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990, 1-800 843-2763, or go to *www.asme.org*.

* * * * *

(3) ASME A112.19.2-2018/CSA B45.1-18 ("ASME A112.19.2-2018"), "Ceramic plumbing fixtures", July 2018 (including Errata — October 2018); IBR approved for appendix T to subpart B.

* * * * *

4. Section 430.23 is amended by revising paragraphs (u) and (v) to read as follows:

§430.23 Test procedures for the measurement of energy and water consumption.

* * * * *

(u) *Water closets*. Measure the water use for water closets, expressed in gallons or liters per flush (gpf or Lpf), in accordance with section 3(a) of appendix T to this subpart.

(v) *Urinals*. Measure the water use for urinals, expressed in gallons or liters per flush (gpf or Lpf), in accordance with section 3(b) of appendix T to this subpart.

* * * * *

5. Appendix T to subpart B of part 430 is revised to read as follows:

Appendix T to Subpart B of Part 430—Uniform Test Method for Measuring the Water Consumption of Water Closets and Urinals

Note: After [**INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**], representations made with respect to the water consumption of water closets or urinals must fairly disclose the results of testing pursuant to this appendix.

On or after [**INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**] and prior to [**INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**] representations, including compliance certifications, made with respect to the water consumption of water closets or urinals must fairly disclose the results of testing pursuant to either this appendix or the appendix as it appeared at 10 CFR part 430, subpart B, in the 10 CFR parts 200 to 499 edition revised as of January 1, 2014. Representations made with respect to the water consumption of water closets or urinals tested within that range of time must fairly disclose the results of testing under the selected version. Given that after [**INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**] representations with respect to the water consumption of water closets and urinals must be made in accordance with tests conducted pursuant to this appendix, manufacturers may wish to begin using this test procedure as soon as possible.

0. Incorporation by reference

DOE incorporated by reference in §430.3, the entire standard for ASME A112.19.2-2018; however, only enumerated provisions of that document apply to this appendix, as follows. Treat precatory language in ASME A112.19.2-2018 as mandatory for the purpose of testing.

a. Section 7.1.1 “All tests,” including Figures 11 and 12, as specified in section 2.a of this appendix;

b. Section 7.1.2 “Gravity flush tank water closets,” as specified in section 2.a of this appendix;

c. Section 7.1.3 “Flushometer tank, electro-hydraulic, or other pressurized flushing device water closets,” as specified in section 2.a of this appendix;

d. Section 7.1.4 “Flushometer valve water closets,” as specified in section 2.a of this appendix;

e. Section 7.1.5 “Procedures for standardizing the water supply system,” including Figures 11 and 12, as specified in section 2.a of this appendix;

f. Section 7.3 “Water consumption test,” as specified in section 3.a of this appendix, except sections 7.3.4 and 7.3.5;

f. Section 8.2.1, including Figure 12, as specified in section 2.b of this appendix;

g. Section 8.2.2, as specified in section 2.b of this appendix;

h. Section 8.2.3, as specified in section 2.b of this appendix;

i. Section 8.6 “Water Consumption Test,” as specified in section 3.b of this appendix, except sections 8.6.3 and 8.6.4;

j. Table 5 “Static test pressures for water closets, kPa (psi),” as specified in sections 2.a and 3.a of this appendix; and

k. Table 6 “Static test pressures for urinals, kPa (psi)” as specified in sections 2.a and 3.a of this appendix.

In cases where there is a conflict, the language of the test procedure in this appendix takes precedence over ASME A112.19.2-2018.

1. Scope

This appendix sets forth the test requirements used to measure the hydraulic performances of water closets and urinals.

2. Test Apparatus and General Instructions

a. When testing a water closet, use the test apparatus and follow the instructions specified in Sections 7.1.1 (including Table 5), 7.1.2, 7.1.3, 7.1.4, and 7.1.5 of ASME A112.19.2-2018). The flushometer valve used in the water consumption test must represent the maximum design flush volume of the water closet. Record each measurement at the resolution of the test apparatus. Round each calculation of water consumption for each tested unit to the same number of significant digits as the previous step.

b. When testing a urinal, use the test apparatus and follow the instructions specified in Sections 8.2.1, 8.2.2, and 8.2.3 (including Table 6) of ASME A112.19.2-2018. The flushometer valve used in the water consumption test must represent the maximum design flush volume of the urinal. Record each measurement at the resolution of the test apparatus. Round each calculation of water consumption for each tested unit to the same number of significant digits as the previous step.

3. Test Measurement

a. Water closets:

(i) Measure the water flush volume for water closets, expressed in gallons per flush (gpf) or liters per flush (Lpf), in accordance with Section 7.3, Water Consumption Test, of ASME A112.19.2-2018. For dual-flush water closets, the measurement of the water flush volume shall be conducted separately for the full-flush and reduced-flush modes and in accordance with the test requirements specified Section 7.3, Water Consumption Test, of ASME A112.19.2-2018. The final measured flush volume for each tested unit is the average of the total flush volumes recorded at each test pressure as specified in Table 5 “Static test pressures for water closets, kPa (psi),” of ASME

A112.19.2-2018, based on the average of the individual flush volumes at a given pressure from the three tests.

(ii) Flush volume and tank trim component adjustments: For gravity flush tank water closets, set trim components that can be adjusted to cause an increase in flush volume, including (but not limited to) the flapper valve, fill valve, and tank water level, in accordance with the printed installation instructions supplied by the manufacturer with the unit. If the printed installation instructions for the model to be tested do not specify trim setting adjustments, adjust these trim components to the maximum water use setting so that the maximum flush volume is produced without causing the water closet to malfunction or leak. Set the water level in the tank to the maximum water line designated in the printed installation instructions supplied by the manufacturer or the designated water line on the tank itself, whichever is higher. If the printed installation instructions or the water closet tank do not indicate a water level, adjust the water level to 1±0.1 inches below the top of the overflow tube or, for gravity flush tank water closets that do not contain an overflow tube, 1±0.1 inches below the top rim of the water-containing vessel for each designated pressure specified in Table 5 of ASME A112.19.2-2018.

b. Urinals—Measure water flush volume for urinals, expressed in gallons per flush (gpf) or liters per flush (Lpf), in accordance with Section 8.6, Water Consumption Test, of ASME A112.19.2-2018. The final measured flush volume for each tested unit is the average of the total flush volumes recorded at each test pressure as specified in Table 6 “Static test pressures for urinals, kPa (psi),” of ASME A112.19.2-2018, based on the average of the individual flush volumes at a given pressure from the three tests.

6. Section 430.32 is amended by revising paragraph (q) to read as follows:

§430.32 Energy and water conservation standards and their compliance dates.

* * * * *

(q) *Water closets*. The maximum water use allowed in gallons per flush for any of the following water closets is as follows:

Water closet type	**Maximum flush rate (gpf (Lpf))**	
	Manufactured after January 1, 1994	**Manufactured after January 1, 1997**
(1) Gravity flush tank water closet	1.6 (6.0)	1.6 (6.0)
(2) Flushometer tank water closet	1.6 (6.0)	1.6 (6.0)
(3) Electromechanical hydraulic water closet	1.6 (6.0)	1.6 (6.0)
(4) Blowout bowl water closet	3.5 (13.2)	3.5 (13.2)
(5) Flushometer valve water closets, other than those with blowout bowls		1.6 (6.0)

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